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ANNUAL CONTRIBUTION OF TIMBER, WILDLIFE, WATER AND OUTDOOR RECREATION TO GEORGIA'S ECONOMY

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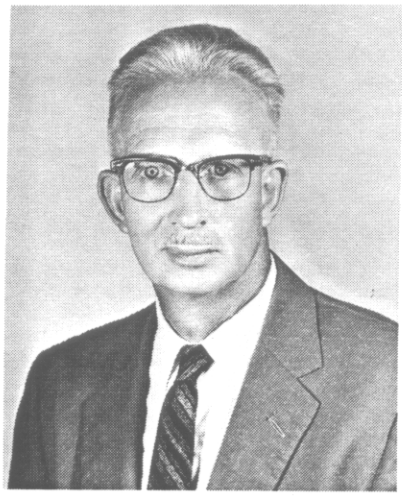

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ACKNOWLEDGEMENT

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The importance of Georgia's forests has long been recognized. Demand for forest products of Georgia origin is now national and international in scope. The value of wood raw materials and finished products continues to increase. Thus, careful economic planning is essential for replenishing, intelligently managing, and using the state's forest resources. An expanding demand for other products and services of Georgia's forests also requires equivalent and complimentary planning for wildlife, water, and outdoor recreation.

Summary estimates are needed regarding the importance and economic value of Georgia's forest resources. Presently, this information is not readily available from any one source. Consequently, practical dollar values have been computed from a number of reliable sources in order to provide these data for government, educators, forest industry, trade associations, and other users.

Wood products contribute over four billion dollars annually to Georgia's economy. Additionally, other related forest uses bring the annual contribution of Georgia's forest land to more than 4.8 billion dollars.

The annual contributions of Georgia's forest resource to the economy are calculated to be:

Forest Uses	Annual Contribution (Thousand Dollars)
Timber	4,220,000
Gum Naval Stores	6,739
Water	155,040
Hunting & Fishing	298,720
Other Recreation	123,020
Total	4,803,519

The Land Base

In Georgia, there are 25,253,000 acres in forests, which represent sixty-eight percent (68%) of the total land area (Tables 1 and 2).

Table 1.--Georgia area by land classes.

Land Class	Area
	(Thousand Acres)
Commercial Forest	24,839.0
Unproductive Forest	30.2
Productive-Reserved Forest	383.7
Total Forest Land	25,252.9
Non-Forest Land	12,126.8
All Land	37,379.7

Georgia's forests are mostly in private ownerships, of which 4.3 million acres are owned by forest industry and 8.4 million acres are owned by farmers. The remaining 10.5 million acres are in miscellaneous private ownerships. Statewide, pine and hardwood types are approximately equal in acreage.

Table 2.--Georgia area of commercial forest land by forest types and ownership classes.

	Ownership classes		
Types	All	Public	Private
	Thousand Acres		
Softwoods	12,325.1	649.4	11,675.7
Hardwoods	12,513.9	922.1	11,591.8
All Types	24,839.0	1,571.5	23,267.5

Value of Georgia's Standing Timber

Stumpage values for 1979, when applied to merchantable timber volumes from the latest Georgia Forest Survey[1/], provide the basis for computing the monetary value of the standing timber resource. Values were computed as follows:

A. Softwood sawtimber trees 9" and larger[2/] 45,655,000 MBF at $100/MBF[3/]	$4,565,500,000
B. Hardwood sawtimber trees 11" and larger[2/] 26,544,000 MBF at $40/MBF	$1,061,760,000
C. Softwood trees 5" to 9" 78,300,000 cords at $15/Cord	$1,174,500,000
D. Hardwood trees 5" to 11" 65,820,000 cords at $4.50/Cord	$ 296,190,000
Total Value of Georgia's Standing Timber	$7,097,950,000

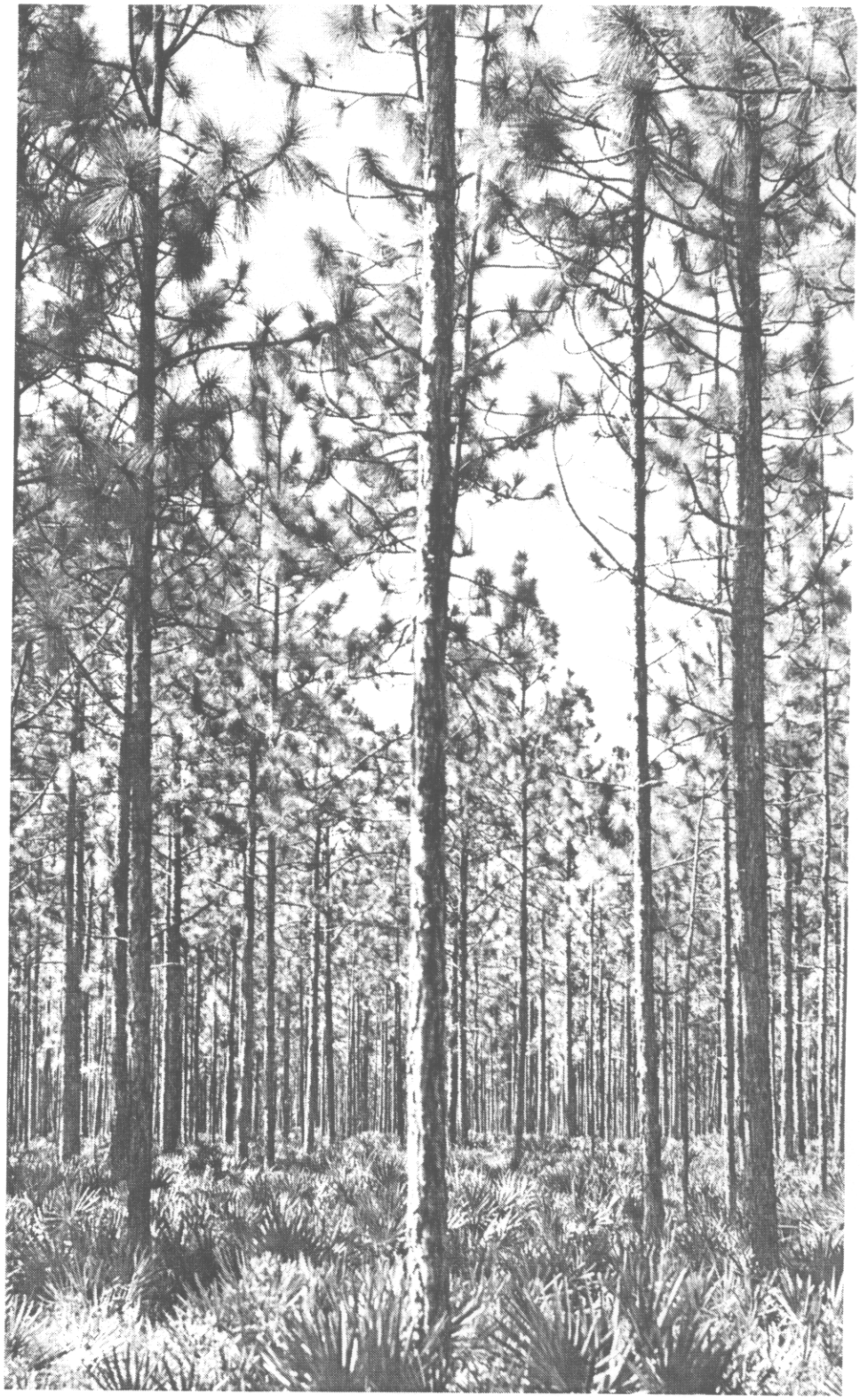

Fig. 1. Commercial forestland in Georgia's coastal plain.

1/ Southeastern Forest Experiment Station, USFS.
2/ International Rule.
3/ Thousand Board Feet.

In addition, the value of land committed to timber production is estimated to exceed $10 billion. This investment in forest land and timber is the basis from which annual economic contributions are derived.

Annual Value of Georgia's Forest Resources

These contributions include products from the timber resource, water benefits, hunting and fishing and other recreational uses. Intangible values and minor products are not included. Estimated production and value of timber products are shown in Table 3.

In 1977, approximately 2,395 businesses were engaged in processing or manufacturing forest products. These firms employed more than 63,000 people whose wages exceeded $727 million.

Value Added Through Processing and Manufacturing

The ultimate contribution of forest resources to the economy may be expressed in terms of the value added to each dollar of stumpage as it proceeds through the various stages of manufacturing.

Nationally, the latest available information shows each dollar of stumpage adds 16.9[4/] dollars to the economy. The comparable value added in Georgia is 14.2[4/] dollars per dollar of stumpage.

Using 1977 product removal data for Georgia, total roundwood stumpage value from timber harvest follows by region:

Southeast	-	$107,690,000
Southwest	-	$ 38,538,000
Central	-	$ 98,395,000
North Central	-	$ 29,967,000
North	-	$ 9,247,000
	-	$283,837,000
Roundwood Chips (Statewide)	-	$ 13,342,000
Total Stumpage	-	$297,179,000

Stumpage value multiplied by 14.2 yields an annual contribution from forest products to Georgia's economy of $4.2 billion.

Table 3.--Value of Georgia's timber products.

Products	Quantity	At Yard	Unit Value	As Products	Unit[1/] Value
		Dollars			
Lumber (Softwood)[2/]	1,583,148 MBF	$221,641,000	$140	$487,610,000	$308
Lumber (Hardwood)[2/]	224,078 MBF	22,408,000	100	78,427,000	350
Veneer & Plywood[2/]	353,530 MBF	61,868,000	175	154,493,000	437
Treated Material[2/]	61,000 MBF	12,200,000	200	24,400,000	400
Misc. Roundwood[2/]	33,000 MBF	4,620,000	140	10,164,000	308
Pulpwood (Softwood)[3/]	5,133,200 Cords	179,662,000	35	1,257,634,000	245
Pulpwood (Hardwood)[3/]	697,100 Cords	19,519,000	28	195,188,000	280
Chips & Residue[3/]	2,535,200 Cords	20,282,000	8	621,124,000	245
Gum Naval Stores	67,390 Barrels	4,380,000	65	6,739,000	100
Total		$546,580,000		$2,835,779,000	

Fig. 2. A feller-buncher in a clear cut harvesting operation.

1/ "Producer Prices and Price Indexes," Data for November 1978, U.S. Department of Labor, Bureau of Labor Statistics.
2/ "Wood-Using Industries in Georgia," Georgia Forestry Commission, 1978.
3/ "Southern Pulpwood Production, 1977," USDA, Forest Service Research Bulletin SE-46, 1978
4/ Unpublished data, U.S. Forest Service

Value of Water

Forests serve the vital function of absorbing and purifying rainfall then releasing it gradually. This helps control erosion, floods, and high costs of water purification. When forest lands are converted to agricultural and other uses, these benefits are reduced or lost.

Water for human consumption and industrial uses must meet certain standards such as freedom from various pollutants and suspended material. Water from forested areas carries less suspended materials and pollutants. It needs less treatment at municipal water works than water from eroding farmland or nonvegetated areas. Thus, water from forested land, either by itself or when added to other sources carrying suspended material, can be purified at less cost.

Savings realized annually from reducing the cost of water treatment and for preventing water damage to soil, crops, channels, lakes, and other property, have been estimated as follows:

A. Additional annual cost of treating water from forest land if it is cleared for agriculture:

816,000 acre feet @ $150 per acre foot = $122,400,000

B. Additional annual cost of soil conservation measures on forest land if cleared for agriculture:

816,000 acre feet @ $40 per acre foot = $32,640,000

Total savings to the economy if the areas of the state remained in forest = $155,040,000.

Recreation

The annual economic contribution of forest related recreation from government useage statistics was computed as follows:

1978 Visitors

A. State Parks and Recreation Areas[2/]
13,158,000 @ $8.20 per visitor day = $107,896,000

B. U. S. Forest Service Lands
1,844,000 @ $8.20 per visitor day = $15,121,000

C. Total Visitor Days
15,002,000 @ $8.20 = $123,017,000

Table 4.--Value of Hunting and Fishing[1/]

Description	Number	Rate	Amount
Hunting			
Big Game User-Days	2,222,100	$ 26.83/Day	$ 59,619,000
Small Game User-Days	2,429,300	10.17/Day	24,706,000
Waterfowl User-Days	93,600	16.17/Day	1,514,000
Total Hunting			$ 85,839,000
Fishing			
People	614,500	$338.90/Person	$208,254,000
Licenses (Hunting & Fishing)			$ 4,631,000
Total			$298,724,000

Forest Resources in Georgia's Future

Projections of trends suggest that Georgia's commercial forest area will diminish as the result of timber harvesting restrictions and conversion to other uses. State population is expected to increase from its present 5.0 million to possibly 7.0 million by the year 2000. Wood production must more than double to satisfy the demand created by population increase in Georgia and the nation. This demand will place increasingly complex responsibilities upon researchers and forest land managers. Hunting and fishing will increase significantly. Other forest related recreation can be expected to double or triple during the next two decades.

1/ Average expenditures were obtained from "1975 National Survey of Hunting, Fishing, and Wildlife-Associated Recreation," USDI, Fish and Wildlife Service (1977). Values were adjusted to 1978 by using an annual inflation rate of three percent.

2/ Georgia Department of Natural Resources

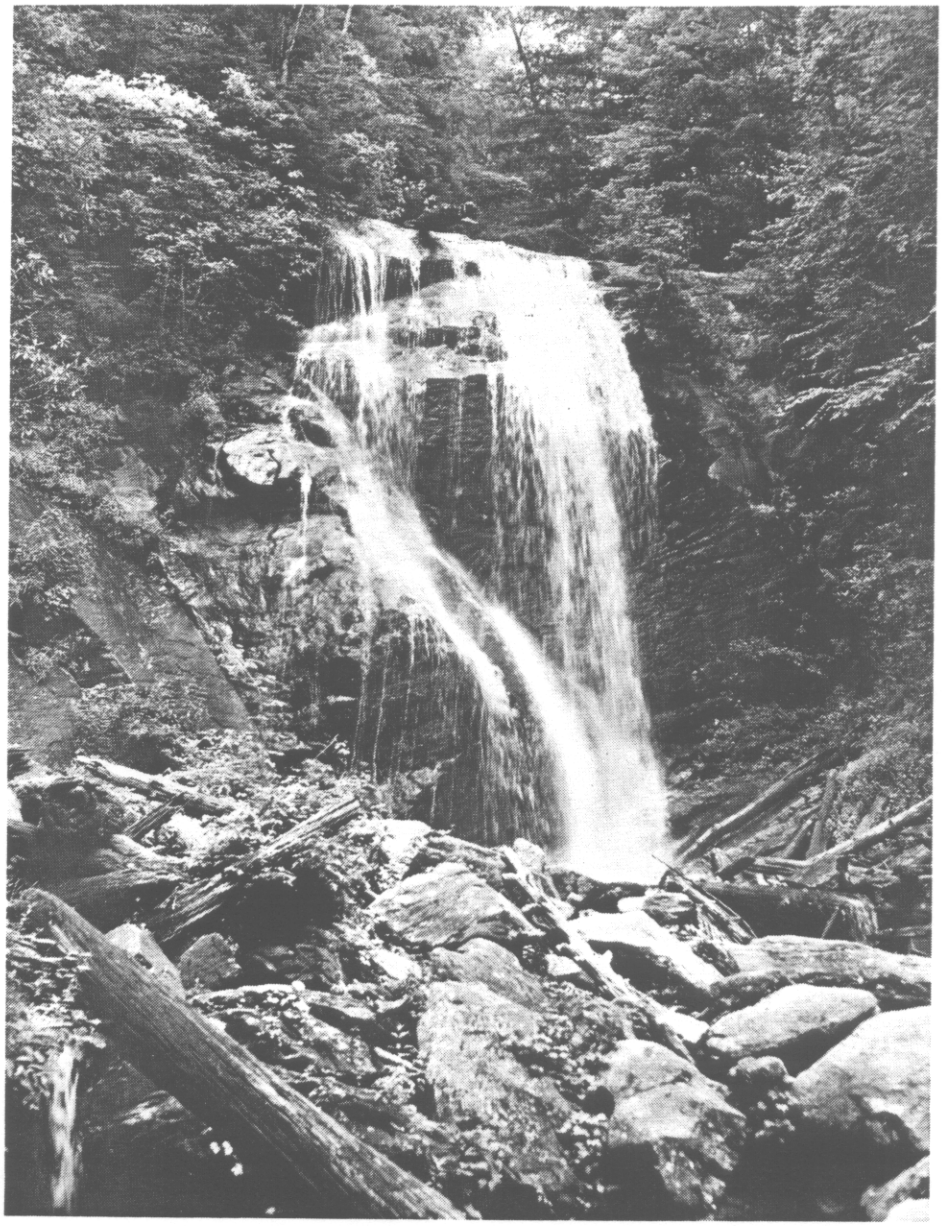

Fig. 3. Forests have a vital role in purifying and controlling water.

A. Ray Shirley, Director
John W. Mixon, Chief of Forest Research

Cost $999.40
Quantity 5,000